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SONY BA-4D SERVICE MANUAL

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SERVICE MANUAL

BA-4D CHASSIS

MODEL	COMMANDER	DEST	CHASSIS NO.
KV-27S42	RM-Y165	US	SCC-S27H-A
KV-27S42	RM-Y165	CND	SCC-S28F-A
KV-27S46	RM-Y167	US	SCC-S27K-A
KV-27S66	RM-Y167	US	SCC-S27L-A
KV-27S66	RM-Y167	CND	SCC-S28G-A
KV-29AL42	RM-Y165	E	SCC-S25U-A
KV-29AL42C	RM-Y165	E	SCC-S25Y-A
KV-29AL66	RM-Y167	E	SCC-S25T-A
KV-29AL66C	RM-Y167	E	SCC-S25V-A
KV-29SL42	RM-Y165	E	SCC-S25W-A
KV-29SL42C	RM-Y165	E	SCC-S25S-A
KV-29SL46	RM-Y167	E	SCC-S25X-A
KV-29XL42M	RM-Y165	MX	SCC-S26C-A

KV-29AL66

RM-Y167

MICROFILM

TRINITRON® COLOR TV

SONY®

WARNINGS AND CAUTIONS

CAUTION

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

WARNING!!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS. THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS, AND IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL FOR SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.
ATTENTION

ATTENTION!!

APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURT-CIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

ATTENTION!!

AFIN D'EVITER TOUT RESQUE D'ELECTROCUTION PROVENANT D'UN CHÁSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÉ LORS DE TOUT DÉPANNAGE. LE CHÁSSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDÉ À L'ALIMENTATION SECTEUR.

ATTENTION AUX COMPOSANTS RELATIFS A LA SECURITE!!

LES COMPOSANTS IDENTIFIES PAR UNE TRAME ET PAR UNE MARQUE ⚠ SUR LES SCHEMAS DE PRINCIPE, LES VUES EXPLOSEES ET LES LISTES DE PIECES SONT D'UNEIMPORTANCE CRITIQUE POUR LA SECURITE DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMERO DE PIECE EST INDIQUE DANS LE PRESENT MANUEL OU DANS DES SUPPLEMENTS PUBLIES PAR SONY. LES REGLAGES DE CIRCUIT DONT L'IMPORTANCE EST CRITIQUE POUR LA SECURITE DU FONCTIONNEMENT SONT IDENTIFIES DANS LE PRESENT MANUEL. SUIVRE CES PROCEDURES LORS DE CHAQUE REMPLACEMENT DE COMPOSANTS CRITIQUES, OU LORSQU'UN MAUVAIS FONTIONNEMENT SUSPECTE.

SELF-DIAGNOSTIC FUNCTION

The units in this manual contain a self-diagnostic function. If an error occurs, the STANDBY/TIMER LED will automatically begin to flash. The number of times the LED flashes translates to a probable source of the problem. A definition of the STANDBY/TIMER LED flash indicators is listed in the instruction manual for the user's knowledge and reference. If an error symptom cannot be reproduced, the Remote Commander can be used to review the failure occurrence data stored in memory to reveal past problems and how often these problems occur.

Diagnostic Test Indicators

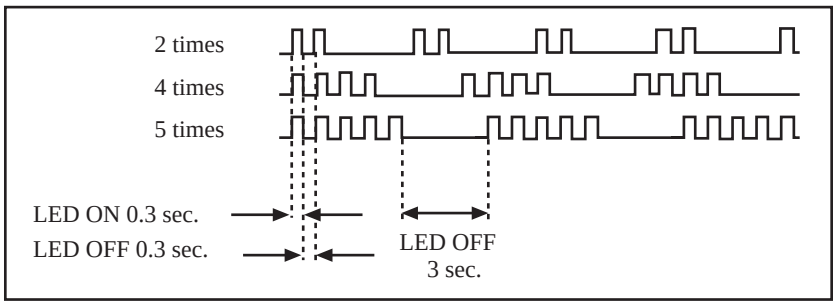
When an error occurs, the STANDBY/TIMER LED will flash a set number of times to indicate the possible cause of the problem. If there is more than one error, the LED will identify the first of the problem areas.
Results for all of the following diagnostic items are displayed on screen. No error has occurred if the screen displays a "0".

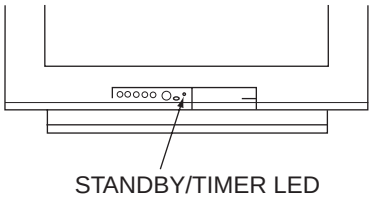
Diagnostic Item Description	No. of times STANDBY/TIMER lamp flashes	Display/ Diagnostic result	Probable Cause Location	Detected Symptoms
* Power does not turn on	Does not light		* Power cord is not plugged in. * Fuse is burned out (F5050) (E Board)	* Power does not come on. * No power is suppled to the TV. * AC power supply is faulty.
* +B overcurrent (OCP)	2 times	2:0 or 2:1	* H.OUT (Q502) is shorted. (A board) * IC1751 is shorted. (C board) * IC1701 is shorted. (CV board)	* Power does not come on. * Load on power line is shorted.
* Vertical deflection stopped*	4 times	4:0 or 4:1	* +13V is not supplied. (A board) * IC 541 is faulty (A board)	* Has entered standby state after horizontal raster. * Vertical deflection pulse is stopped. * Power line is shorted or power supply is stopped.
* White balance failure (not balanced)	5 times	5:0 or 5:1	* Video OUT (Q306 to 308) is faulty.(A bd) * IC301 is faulty. (A board) * G2 is improperly adjusted**.	* No raster is generated. * CRT cathode current detection reference pulse output is small.

***** If a +B overcurrent is detected, stoppage of the vertical deflection is detected simulatneously. The symptom that is diagnosed first by the microcontroller is displayed on the screen.

****** Refer to Screen (G2) Adjustment in Section 3-4 of this manual.

Display of Standby/Timer LED Flash Count





Diagnostic Item	Flash Count*
+B overcurrent	2 times
Vertical deflection stopped	4 times
White balance failure	5 times

*One flash count is not used for self-diagnostic.

Stopping the Standby/Timer LED Flash

Turn off the power switch on the TV main unit or unplug the power cord from the outlet to stop the STANDBY/TIMER LAMP from flashing.

Self-Diagnostic Screen Display

For errors with symptoms such as “power sometimes shuts off” or “screen sometimes goes out” that cannot be confirmed, it is possible to bring up past occurrences of failure on the screen for confirmation.

To Bring Up Screen Test

In standby mode, press buttons on the Remote Commander sequentially, in rapid succession, as shown below:

Display ➡ Channel 5 ➡ Sound volume − ➡ Power ON

⇧

Note that this differs from entering the service mode (sound volume +).

Self Diagnostic Screen Display

SELF DIAGNOSTIC

2:		0 ← Numeral “0” means that no fault was detected.
3:	N/A	0
4:		0
5:		1 ← Numeral “1” means a fault was detected one time only.
101:	N/A	0

Handling of Self-diagnostic Screen Display

Since the diagnostic results displayed on the screen are not automatically cleared, always check the self-diagnostic screen during repairs. When you have completed the repairs, clear the result display to “0”.

Unless the result display is cleared to “0”, the self-diagnostic function will not be able to detect subsequent faults after completion of the repairs.

Clearing the Result Display

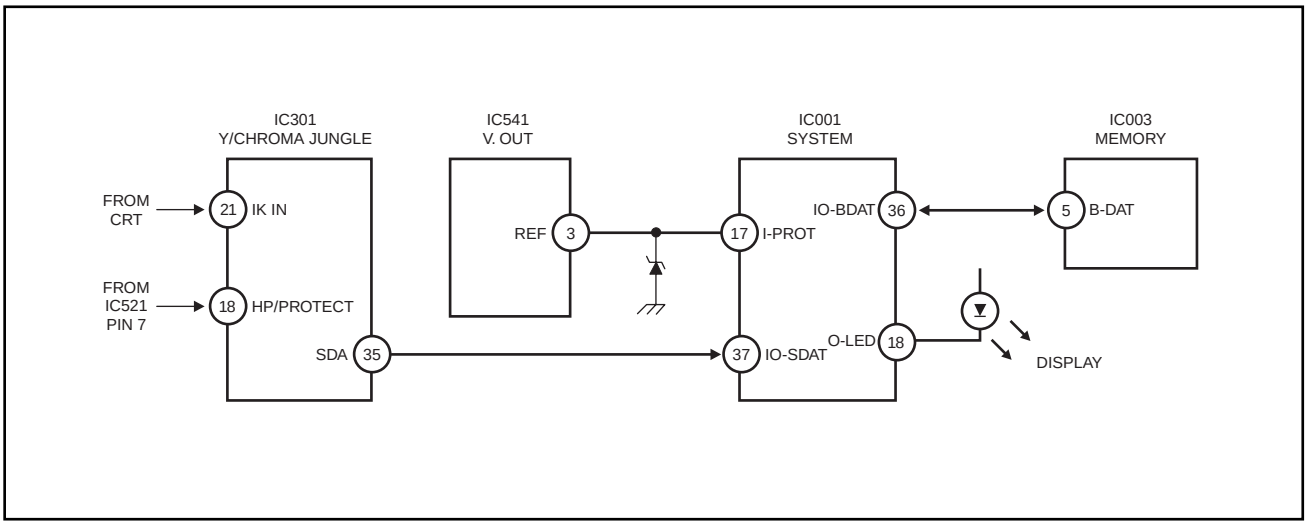
To clear the result display to “0”, press buttons on the Remote Commander sequentially when the diagnostic screen is displayed, as shown below:

Channel 8 ➡ ENTER

Quitting the Self-Diagnostic Screen

To quit the entire self-diagnostic screen, turn off the power switch on the Remote Commander or the main unit.

Self-diagnostic Circuit



+B overcurrent (OCP)

Occurs when an overcurrent on the +B (115V) line is detected by pin 18 of IC301. If the voltage of pin 18 of IC 301 is less than 1V when V.SYNC is more than seven verticals in a period, the unit will automatically turn off.

Vertical deflection stopped

Occurs when an absence of the vertical deflection pulse is detected by pin 17 of IC001. Power supply will shut down when waveform interval exceeds 2 seconds.

White balance failure

If the RGB levels* do not balance within 2 seconds after the power is turned on, this error will be detected by IC301. TV will stay on, but there will be no picture.

*(Refers to the RGB levels of the AKB detection Ref pulse that detects 1K.)

SECTION 5
CIRCUIT ADJUSTMENTS

Use the Remote Commander (RM-Y168) to perform the circuit adjustments in this section.

NOTE: Test Equipment Required:

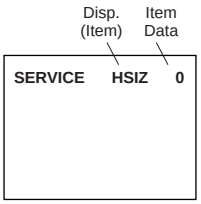
- Pattern generator
- Frequency counter
- Digital multimeter
- Audio oscillator

5-1. Setting the Service Adjustment Mode

1. Standby mode (power off).
2. [Display] ➡ Channel [5] ➡ Sound volume [+] ➡ Power ON on the Remote Commander (press each button within a second).

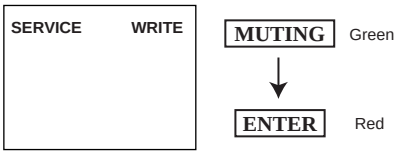
Service Adjustment Mode On

1. The CRT displays the item being adjusted.

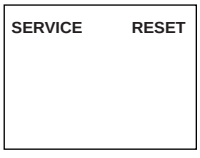


2. Press [1] or [4] on the Remote Commander to select an item.
3. Press [3] or [6] on the Remote Commander to change the data.
4. Press [MUTING] then [ENTER] to save into the memory.

Service Adjustment Mode Memory



1. Press [8] then [ENTER] on the Remote Commander to initialize.



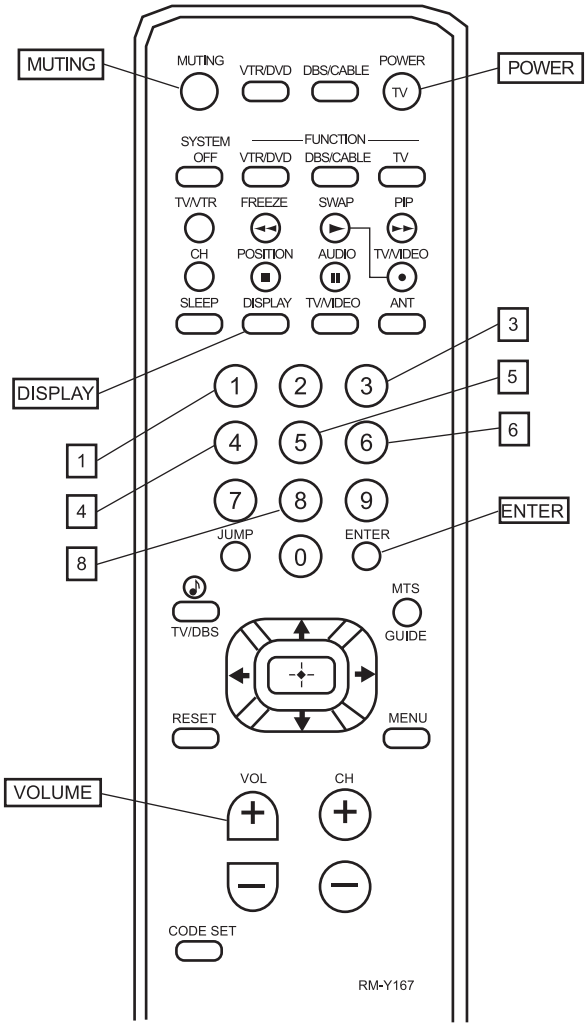
Carry out step 1 when adjusting IDs 0–4 and when replacing and adjusting IC003.

2. Turn set off then on to exit service adjustment mode.

5-2. Memory Write Confirmation Method

1. After adjustment, remove the power plug from the AC outlet, then plug it in again.
2. Turn the power switch ON and set to service mode.
3. Call the adjusted items again to confirm they were adjusted.

5-3. Adjust Buttons and Indicators



Adjustment Items

Item	Service Name	Name	Data Range	Initial Value	Average Data
1	HSIZ	A_HSIZE	0-63	31	42
2	HPOS	A_HPOS	0-63	31	22
3	VBOW	A_AFCB	0-15	7	6
4	VANG	A_AFCB	0-15	7	6
5	TRAP	A_TRAP	0-15	7	7
6	PAMP	A_PAMP	0-63	31	16
7	CPIN	A_CPIN	0-63	31	34
8	VSIZ	A_VSIZ	0-63	31	33
9	VPOS	A_VPOS	0-63	31	38
10	VLIN	A_SCOR	0-15	7	6
11	SCOR	A_SCOR	0-15	7	7
12	VZOM	A_SCROLL	0-1	0	0
13	EHT	A_TRAP	0-15	7	4
14	ASP	A_ASPECT	0-63	63	48
15	SCRL	A_SCROLL	0-63	31	31
16	HBLK	A_ASPECT	0-1	0	1
17	LBLK	A_HBLK	0-15	7	15
18	RBLK	A_HBLK	0-15	7	3
19	VUSN	A_ASPECT	0-1	0	0
20	HDW	A_PON	0-1	0	0
21	EWDC	A_HSIZE	0-1	0	0
22	LVLN	A_VLIN	0-15	0	0
23	UVLN	A_VLIN	0-15	0	0
24	RDRV	A_RDRIVE	0-63	31	14
25	GDRV	A_GDRIVE	0-63	31	10
26	BDRV	A_BDRIVE	0-63	31	8
27	RCUT	A_RCUT	0-15	7	8
28	GCUT	A_GCUT	0-15	7	4
29	BCUT	A_GCUT	0-15	7	5
30	DCOL	A_GDRIVE	0-1	0	1
31	SHUE	A1_SUBHUE	0-31	14	9
32	SCOL	A1_SUBCOL	0-31	14	23
33	SBRT	A1_SUBBRT	0-31	14	10
34	RON	A_VIDSEL	0-1	0	1
35	GON	A_VIDSEL	0-1	0	1
36	BON	A_VIDSEL	0-1	0	1
37	AXPL	A_PON	0-1	0	0
38	AXNT	A_SHPF0	0-1	0	0
39	CBPF	A_XTAL	0-1	0	1
40	CTRP	A_XTAL	0-1	0	1
41	COFF	A_COFF	0-1	0	0
42	KOFF	A_COFF	0-1	0	0
43	SSHP	A1_SUBSHP	0-15	8	6
44	SHPF	A_SHPF0	0-1	0 / 0 *2	1
45	PREL	A_DCTRAN	0-1	0	1
46	Y-DC	A_DCTRAN	0-1	0	1
47	GAMM	A_BDRIVE	0-3	0	0
48	ABLM	A_RDRIVE	0-1	1	1
49	VTH	A_RDRIVE	0-1	0	1
50	YDEL	A_HOSC	0-15	7	7
51	NCOL	A_PIC	0-1	0	1
52	FSC	A_PIC	0-1	0	1
53	K-ID	A_KID	0-1	0	0
54	HOSC	A_HOSC	0-15	7	7
55	VSS	A_FFREQ	0-1	0	0
56	HSS	A_FFREQ	0-1	0	0
57	HMSK	A_VSIZ	0-1	0	1
58	VTMS	A_TVOFF	0-3	0	0
59	CDMD	A_FFREQ	0-3	0 / 1 *2	0
60	AFC	A_VPOS	0-3	0 / 0 *2	0
61	FIFR	A_FFREQ	0-3	0	3

	Service Name	Name	Data Range	Initial Value	Average Data
62	SBAS		0-15	7	8
63	STRE		0-15	7	9
64	SBAL	A1_SUBBAL	0-31	14	13
65	DISP	A_OSDPOS	0-127	0	11
66	PADJ	A_PADJ	0-63	3	51
67	HCHM	A6_HCHM	0-255	69	69
68	HCLM	A6_HCLM	0-255	16	16
69	HCHS		0-255	69	69
70	HCLS		0-255	16	16
71	PFRN		0-1	0	0
72	PRVS		0-1	0	0
73	PCON		0-127	32	70
74	PUCO		0-127	75	63
75	PVCO		0-127	40	63
76	PHUE		0-31	15	15
77	PKIL		0-1	0	0
78	PSEP		0-3	2	2
79	PDCO		0-3	0	0
80	PEXP		0-3	2	2
81	PBGS		0-63	14	14
82	PYDL		0-15	3	7
83	PBRT		0-31	0	25
84	PVPE		0-16	0	0
85	PUPE		0-16	0	0
86	PACS		0-1	0	1
87	PSDL		0-3	0	0
88	PMVP		0-3	0	0
89	PCGA		0-1	0	1
90	PBIT		0-1	0	0
91	PAFC		0-1	0	0
92	PACC		0-63	21	20
93	PBUR		0-1	0	0
94	PEVE		0-1	0	0
95	PINW		0-1	0	0
96	PINR		0-1	0	0
97	PREF		0-1	0	0
98	PARE		0-1	1	1
99	PAVE		0-1	0	0
100	PFRA		0-15	0	0
101	PPAL		0-255	0	0
102	PHPO		0-31	31	2
103	PVPO		0-31	21	22
104	PHTI		0-15	10	10
105	PHAJ		0-15	2	2
106	PBGY		0-15	0	0
107	PCRO		0-1	0	0
108	PPAR		0-63	2	2
109	PHPF		0-1	0	1
110	PVCH		0-1	0	0
111	PVON		0-1	0	1
112	PVLN		0-31	17	17
113	PVSB		0-255	64	64
114	PVLV		0-255	130	130
115	ID0	A_NVMID0	0-255	23	See ID map
116	ID1	A_NVMID1	0-255	3	See ID map
117	ID2	A_NVMID2	0-255	11	See ID map
118	ID3	A_NVMID3	0-255	1	See ID map
119	ID4	A_NVMID4	0-255	23	See ID map
120	ID5	A_NVMID5	0-255	0	See ID map
121	ID6	A6_NVMID6	0-255	0	See ID map
122	ID7	A6_NVMID7	0-255	64	See ID map

*2: TV/VIDEO

SERVICE ID0 25

Notes:

Item numbers 1-122 show the sequence of adjustments that may be selected while in service mode.

Data Range indicates the range of possible settings for each adjustment mode.

Initial Data indicates the standard settings for each adjustment mode.

Feature ID Map

	KV-	Destination	ID-0	ID-1	ID-2	ID-3	ID-4	ID-5	ID-6	ID-7
1	27S42	US	25	145	15	235	11	3	0	64
2	27S42	CND	89	145	15	135	11	3	0	64
3	27S46	US	25	155	15	235	11	3	1	64
4	27S66	US	25	155	79	235	11	3	7	64
5	27S66	CND	89	155	79	155	11	3	7	64
6	29AL42	E	17	147	173	203	123	3	0	64
7	29AL42C	E	17	147	173	203	123	3	0	64
8	29AL66	E	17	151	237	203	123	3	7	64
9	29AL66C	E	17	151	237	203	123	3	7	64
10	29SL42	E	17	145	143	203	123	3	0	64
11	29SL42C	E	17	145	143	203	123	3	0	64
12	29SL46	E	17	155	143	203	123	3	1	64
13	29XL42M	MX	17	145	143	203	123	3	0	64

5-4. A BOARD ADJUSTMENTS

H. Frequency (Free Run) Check

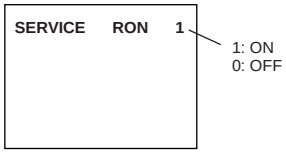
1. Input a TV mode (RF) with no signal.
2. Connect a frequency counter to base of Q501 (TP-500 H. DRIVE).
3. Check H. Frequency for 15735 ± 200 Hz.

V. Frequency (Free Run) Check

1. Select video 1 with no signal input.
2. Set the conditions for a standard setting.
3. Connect the frequency counter on the A board to TP-508 (V OUT) or CN 501 pin ⑥ (V DY+) and ground.
4. Check that V. Frequency shows 60 ± 4 Hz.

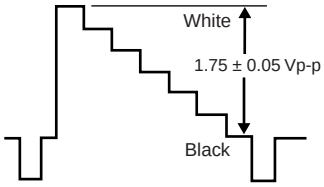
Sub Contrast Adjustment (RDRV)

1. Input a color-bar signal and set the level to 75%.
2. In Standard mode, set PICTURE to maximum, COLOR to minimum, and BRIGHTNESS to center.
3. Activate the Service Adjustment Mode.
4. Set both GON and BON items. Using [3] and [6]; set each to the following values. Leave RON set to 1.



R ON: ON (1)
G ON: OFF (0)
B ON: OFF (0)

5. Select the item DCOL item and set it to 0.
6. Connect an oscilloscope probe to CN301 pin ⑤ (RED OUT).
7. Select RDRV with [1] and [4] .
8. Adjust the value of RDRV with [3] and [6] for 1.75 ± 0.05 Vp-p.



9. Reset the item DCOL to 1.
10. Reset GON and BON values to 1.

R ON: ON (1)
G ON: ON (1)
B ON: ON (1)

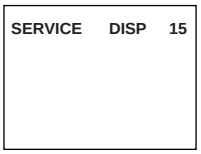
11. Reset Picture, Color, and Bright to normal values:

PICTURE: MAX
COLOR: CENTER
BRIGHT: CENTER

12. Press [MUTING] then [ENTER] to save into the memory.

Display Position Adjustment (DISP)

1. Input a color-bar signal.
2. Set to Service Adjustment Mode.
3. Select DISP with [1] and [4] .
4. Adjust values of DISP with [3] and [6] to adjust characters to the center.
5. Write to memory by pressing [MUTING] then [ENTER] .
6. Check to see if the text is displayed on the screen.

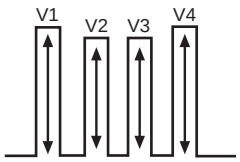


Sub Bright Adjustment (SBRT)

1. Input a crosshatch signal.
2. Activate the Service Adjustment Mode.
3. Set the PICTURE and BRIGHTNESS to minimum.
4. Select the SBRT item with [1] and [4] .
5. Adjust the values of SBRT with [3] and [6] to obtain a faintly visible crosshatch.
6. Press [MUTING] then [ENTER] to save into the memory.

Sub Hue, Sub Color Adjustment (SHUE, SCOL)

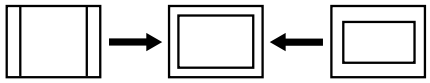
1. Input a color-bar signal.
2. Activate the Service Adjustment Mode.
3. Select the DCOL item and set the value to 0.
4. Connect an oscilloscope probe to CN301
   Pin ⑦ (BLUE OUT).
5. Select the SHUE and SCOL item with [1] and [4] .
6. While showing the SHUE item, adjust the waveform with [3] and [6] until the second and third bars show the same level (V2 = V3 ± 0.15 Vp-p).
7. While showing the SCOL item, adjust the waveform with [3] and [6] until the first and fourth bars show the same level (V1 = V4 ± 0.15 Vp-p).



8. Select the DCOL item and reset to 1.
9. Press [MUTING] then [ENTER] to save into the memory.

V. Size Adjustment (VSIZ)

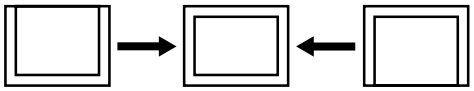
1. Input a crosshatch signal.
2. Activate the Service Adjustment Mode.
3. Select the VSIZ item with [1] and [4] .
4. Adjust value of VPOS with [3] and [6] for the best vertical center.
5. Press [MUTING] then [ENTER] to save into the memory.



V. Center Adjustment (VPOS)

Perform this adjustment after performing H. Frequency (Free Run) check.

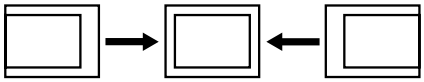
1. Input a crosshatch signal.
2. Activate the Service Adjustment Mode.
3. Select the VPOS item with [1] and [4] .
4. Adjust value of VPOS with [3] and [6] for the best vertical center.
5. Press [MUTING] then [ENTER] to save into the memory.



H. Center Adjustment (HPOS)

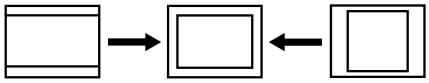
Perform this adjustment after performing H. Frequency (Free Run) check.

1. Input a crosshatch signal.
2. Activate the Service Adjustment Mode.
3. Select the HPOS item with [1] and [4] .
4. Adjust the value of HPOS with [3] and [6] for the best horizontal center.
5. Press [MUTING] then [ENTER] to save into the memory.



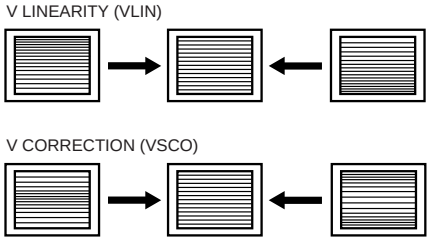
H.Size Adjustment (HSIZ)

1. Input a cross hatch signal.
2. Activate the Service Adjustment Mode.
3. Select HSIZ with [1] and [4] .
4. Adjust with [3] and [6] for the best Horizontal size.
5. Press [MUTING] then [ENTER] to save into the memory.



V. Linearity (VLIN), V Correction (VSCO)

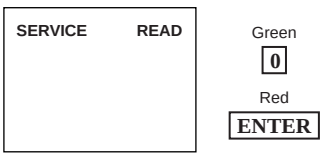
1. Input a crosshatch signal.
2. V. Correction is automatically adjusted from the circuit and should satisfy the conditions below:



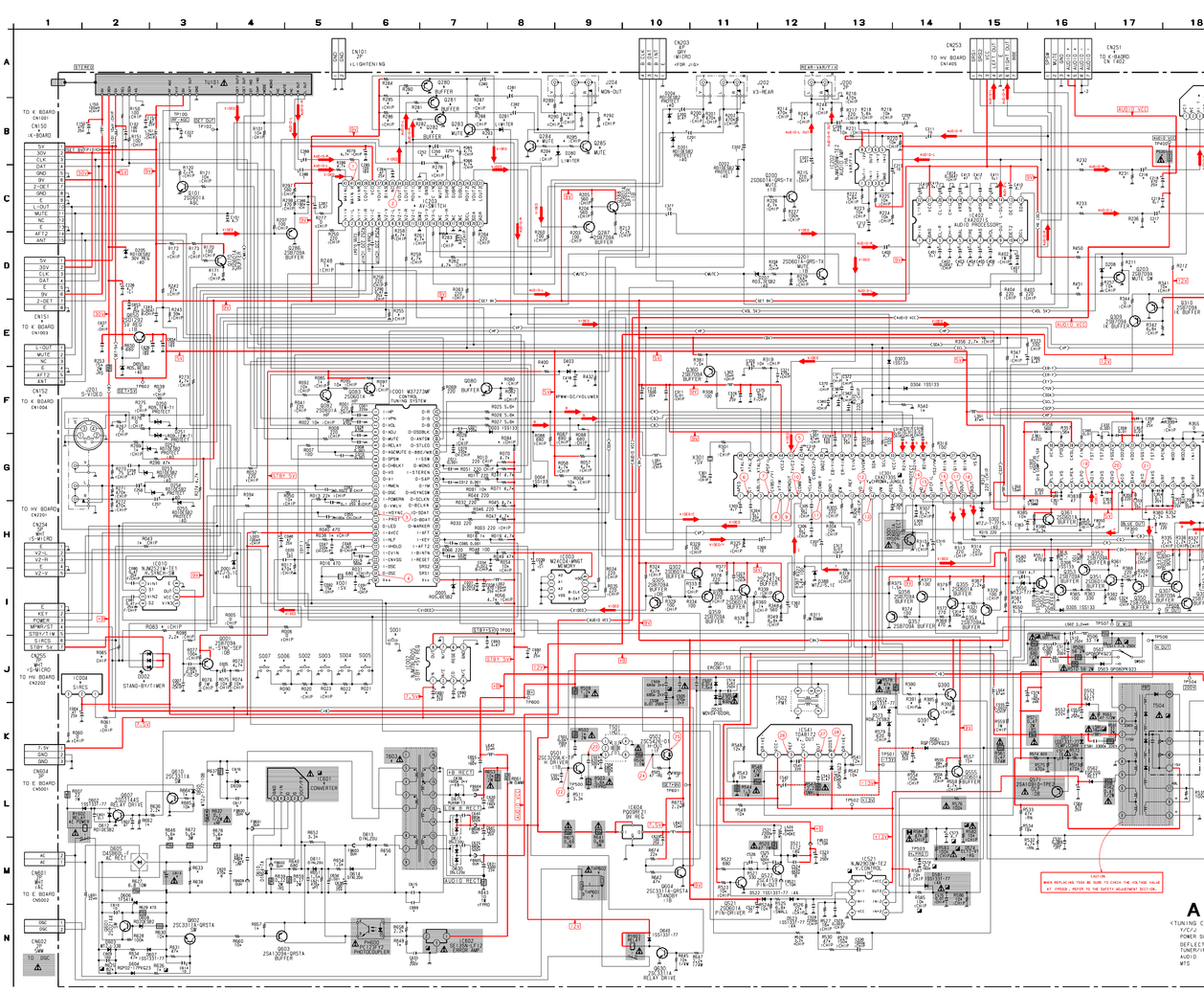
Service Adjustment Mode Memory

1. Change the value of the DCOL item to 1.
2. After completing all adjustments, press [0] then [ENTER] .

Read From Memory



A BOARD SCHEMATIC DIAGRAM



857.3 A Board Schem.p65 1

3/26/99, 2:30 PM

P [P in P]

(KV-27S46/29AL42/29AL42C/29AL66/29AL66C ONLY)

K [SECOND TUNER, AUDIO AMP]

(KV-27S66/29AL42/29AL42C/29AL66/29AL66C ONLY)

COMPONENT SIDE

CONDUCTOR SIDE

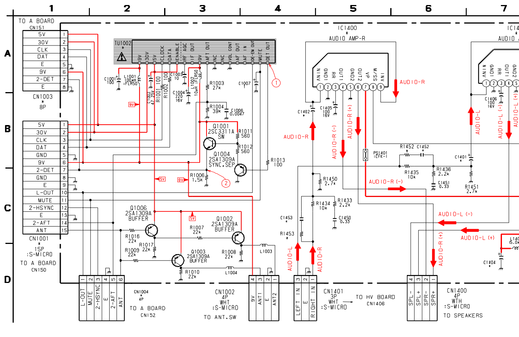
P BOARD WAVEFORMS

P BOARD TRANSISTOR VOLTAGE LIST

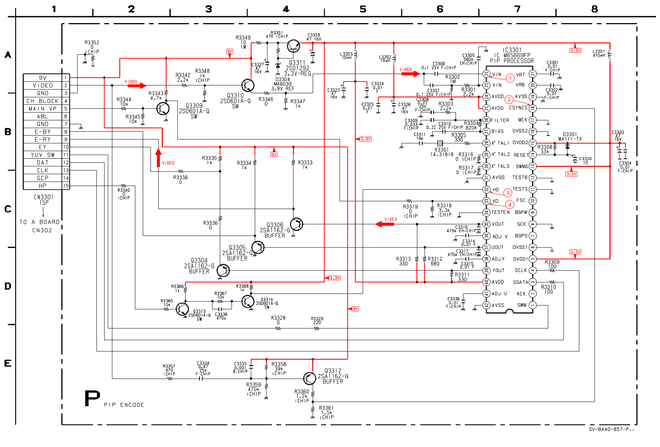
	B	C	E
Q3304	2.3	GND	2.9
Q3305	3.0	GND	3.7
Q3306	3.0	GND	3.7
Q3309	0.7	0.0	GND
Q3310	0.3	8.9	1.8
Q3311	3.9	7.4	3.3
Q3312	8.2	0.1	8.9
Q3313	0.2	3.3	GND
Q3314	3.1	0.6	GND

All voltages are in V

K BOARD SCHEMATIC DIAGRAM



P BOARD SCHEMATIC DIAGRAM



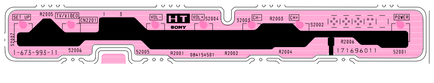
P BOARD IC VOLTAGE LIST

IC3301		22	0.8
pin	volt	23	0.7
1	0.0	24	3.3
2	0.0	25	3.3
3	4.9	26	1.5
4	4.9	27	1.5
5	3.3	28	2.0
6	NC	29	0.4
7	0.0	30	0.5
8	0.0	31	GND
9	NC	32	0.6
10	NC	33	0.0
11	0.0	34	GND
12	0.0	35	3.0
13	3.3	36	1.2
14	3.3	37	2.9
15	3.3	38	1.3
16	0.0	39	2.3
17	0.0	40	3.3
18	0.4	41	1.2
19	GND	42	GND
20	0.5		
21	1.5		

All voltages are in V

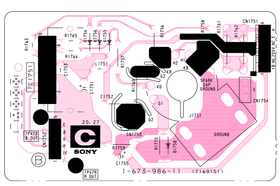
HT [CNTL]

(KV-29AL42/29AL42C/29AL66/29AL66C ONLY)



C [RGB DRIVE, CRT DRIVE]

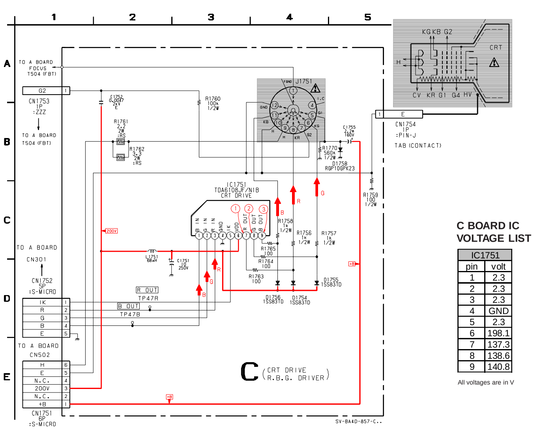
(KV-27S42/27S46/27S66/29SL42/29SL42C/29XL42M ONLY)



C BOARD WAVEFORMS

1	2	3
168.2 Vp-p (H)	140.6 Vp-p (H)	146.5 Vp-p (H)

C BOARD SCHEMATIC DIAGRAM


C (CRT DRIVE V.R.B.G. DRIVER)
CRT
CV KR G1 G4 HV
TO A BOARD FOCUS T504 (F-BT)
TO A BOARD T504 (F-BT)
TO A BOARD CN301
TO A BOARD CN502
TO A BOARD CN701 (P-MICRO)

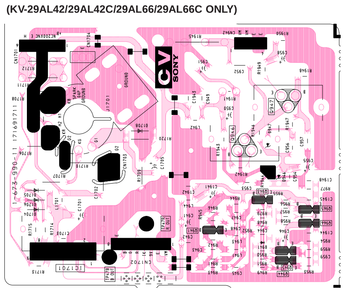
C BOARD IC VOLTAGE LIST

IC1751	
pin	volt
1	2.3
2	2.3
3	2.3
4	GND
5	2.3
6	198.1
7	137.3
8	138.6
9	140.8

All voltages are in V

CV [RGB DRIVE, VELOCITY MOD.]

(KV-29AL42/29AL42C/29AL66/29AL66C ONLY)



CV BOARD TRANSISTOR VOLTAGE LIST

	B	C	E
Q943	4.5	8.9	3.7
Q944	2.1	8.9	1.5
Q945	2.1	6.0	1.5
Q946	133.2	67.1	134.7
Q947	0.9	67.1	0.3
Q955	6.5	8.9	6.2
Q966	6.0	0.0	6.2

All voltages are in V

CV BOARD IC VOLTAGE LIST

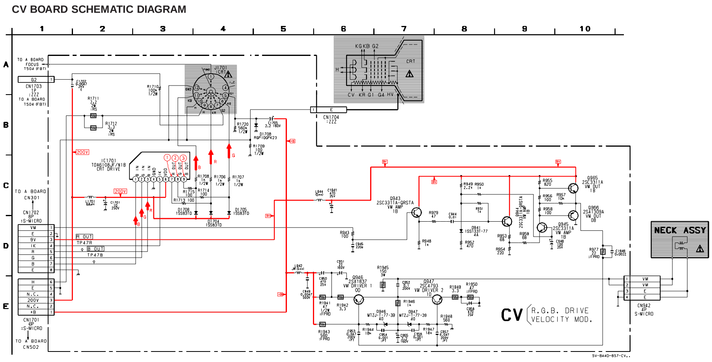
IC1701	
pin	volt
1	2.3
2	2.3
3	2.3
4	GND
5	3.7
6	203.6
7	129.0
8	126.0
9	127.0

All voltages are in V

CV BOARD WAVEFORMS

1	2	3
179.7 Vp-p (H)	156.3 Vp-p (H)	167.2 Vp-p (H)

CV BOARD SCHEMATIC DIAGRAM


CV (R.G.B. DRIVE VELOCITY MOD.)
NECK ASSY
CRT
CV KR G1 G4 HV
TO A BOARD FOCUS T504 (F-BT)
TO A BOARD T504 (F-BT)
TO A BOARD CN301
TO A BOARD CN502
TO A BOARD CN701 (P-MICRO)

857 5 C E HV boards.p65 1

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